INTRODUCTION

SPACE
An *opportunity* for us AND our adversaries
A *lead* we cannot lose
An *asset* we must protect
- NDP Report, December 1997

The United States Space Command's Vision for 2020 guides how our military space strategy will evolve in the 21st Century and is the standard for measuring the progress of USSPACECOM and its components–Army Space Command, Naval Space Command, and AFSPACE (14th AF). To carry out the Vision, we have developed a very ambitious and much needed Long Range Plan (LRP).

The LRP integrates military space planning to achieve USSPACECOM's Vision for 2020. It provides direction to the USSPACECOM staff and Components, as well as recommendations to other organizations, on issues that are "out of USSPACECOM's lane." Clearly, we can't achieve many of the goals in this LRP–especially on issues "outside our lane"–without direct and indirect support from many other organizations. The "out of our lane issues" (described more fully in Chapter 11) are a clear indication that much of our nation's future success in space is based upon many organizational interdependencies. Reaching these goals will enhance our space capabilities while developing partnerships with other DoD and federal organizations, industry, and our international allies.

The USSPACECOM Vision (described in Chapter 2) fully supports *Joint Vision 2010,* as well as the National Security Space Master Plan. This LRP leverages these and other DoD planning efforts. USSPACECOM Directorates and Components were the core of this plan's development. However, we also reached out to industry, and to many key DoD (e.g., NRO, BMDO, labs) and national organizations for help in developing many of the concepts for this document.

Three compelling sets of circumstances have set the stage for developing USSPACECOM's Vision and LRP. First, the United States does not expect to face a global military peer competitor within the next two decades–we have entered a "strategic pause." Thus, the US military has an opportunity similar to the period between World War I and World War II–a time for exploring innovative warfighting concepts and capabilities. Just as air power developed during the 1920s and 1930s, space power will advance over the next decade. The growth of space power closely resembles air power's evolution during the first half of this century. Air power evolved from supporting warfighters (e.g., communications and reconnaissance), to air combat, and finally to strategically projecting force on the battlefield. Similarly, space power started out mainly as support (e.g., communications and surveillance) and may move toward space combat operations. Eventually, as it continues to mature, it may allow us to project force from space to earth. Also, just as the explosive growth of commercial aircraft in the 1930s and 1940s led to many new capabilities for aircraft, the commercial space industry's rapid advance in the 1990s is spurring the development of future space capabilities. Now is the time to begin developing space capabilities, innovative concepts of operations for warfighting, and organizations that can meet the challenges of the 21st Century.

The second circumstance is the nation's dependence on space capabilities in the 21st Century which rivals its dependence on electricity and oil in the 19th and 20th Centuries. Electricity and oil were critical parts of the industrial revolution; space capabilities (e.g., communications, positioning and timing, imaging, earth resource monitoring, and weather) are emerging as vital to the information revolution. Today, military operations depend critically on space capabilities. In the 21st Century, they'll rely even more on such services as global communications, reconnaissance and surveillance in near real time, missile warning,

weather, and navigation. Only these space capabilities can integrate the effects of widely dispersed weapons platforms and forces, provide dominant awareness of the battlefield, and allow for precision engagement and dominant maneuver. Even as US military forces have downsized in the 1990s, their commitments have steadily increased. As military operations become more lethal, space power enables our streamlined forces to minimize the loss of blood and national treasure.

As a recent report states, "Commercial use of space is rapidly expanding on a global scale. In the next ten years, more than 1,000 satellites are projected to be launched. This represents a total investment of more than one-half trillion dollars."[1] At the same time, the Tofflers have observed that the "way a nation makes wealth is the means by which it will choose to wage warfare."[2] As the US economy evolves from an industrially-focused nation to an information-based one, the US military is following the same pattern. The tools of warfare in the Information Age may differ from the tools of 20th Century warfare. Our nation's increasing military and economic dependence on space power makes it likely for space to become a vital national interest. This same dependence also implies vulnerability. **US interests and investments in space must be fully protected to ensure our nation's freedom of action in space.**

The last circumstance is the potential for space capabilities to become a "Revolution in Military Affairs." This type of revolution is a fundamental change in the nature of warfare that doesn't depend solely on exploiting technology. Its focus is on developing operational capabilities, Concepts of Operations (CONOPS), and organizations. Space power in the 21st Century looks similar to previous military revolutions, such as aircraft-carrier warfare and Blitzkrieg. Just as concepts for aircraft-carrier warfare developed between the wars, space-power concepts are emerging and developing to support plans for joint theater campaigns. Being "late to need" in developing space power could bring grave consequences.

In all three sets of circumstances discussed above, innovative operational capabilities emerged. Thus, USSPACECOM's LRP focuses on operational capabilities (supported by the Components' systems and candidate technologies), CONOPS, and organizations. This model for change, also being used to carry out *Joint Vision 2010,* encompasses **d**octrine, **o**rganizations, **t**raining, **m**ateriel, **l**eadership, and **p**ersonnel (commonly referred to as "DOTMLP").

Three additional issues require our attention. First, Unified Commands and the Military Services have distinct but supportive roles and missions. As described in Joint Publication 0-2, Unified Commands are responsible for "deterring war and preparing for war by planning for the transition to war … and planning and conducting campaigns and major operations."[3] They do so mainly by shaping (engagement and enlargement) and then operating in their regions. The Unified Commands must identify the operational capabilities and strategies needed to shape and conduct operations within these regions. Joint Publication 0-2 also says the military departments must "organize, train and equip interoperable forces for assignment to combatant commands."[4] Clearly, the Unified Commands and the Services must coordinate to provide the capabilities and organizations that will make operations successful. Just as the Unified Commander's Integrated Priority List (IPL) guides the Services in the near term, this LRP provides guidance on material, doctrine, and organizations out to 2020. It identifies important future operational capabilities, CONOPS, and organizations. Space systems and technologies must also be synchronized with the warfighting capabilities that USSPACECOM needs to shape, protect, and defend the region of space as stated in the 1998 Unified Command Plan.

Secondly, USSPACECOM recognizes that we must prioritize warfighting capabilities within space and across all of DoD because we can't afford everything. Over time, tradespace analyses and alternative funding sources must shape decisions that will lead to future force structures (refer to Chapter 10). Missions are likely to emerge that are best suited for space. These may be entirely new missions (e.g., force application) or current missions (e.g., land, sea and air surveillance).

Finally, this LRP recognizes the ill-defined intersection of space control and information operations, and focuses mainly on space. Future efforts will have to integrate space capabilities into an overall strategy for information operations.

The time has come to address, among warfighters and national policy makers, the emergence of space as a center of gravity for DoD and the nation. We must commit enough planning and resources to protect and enhance our access to, and use of, space. Although international treaties and legalities constrain some of the LRP's initiatives and concepts, our abilities in space will keep evolving as we address these legal, political, and international concerns. Our dominance of space depends not only on new systems but on the emerging synergy of space capabilities, CONOPS, organizational change, effective and innovative ways to train and lead, plus our most valuable resource–our Soldiers, Sailors, Airmen, and Marines. This LRP provides focus and direction to USSPACECOM and the Components. It will stimulate a healthy dialogue on how best to ensure access to and protection of US national interests and investment in space and be a springboard to the future.

1 Transforming Defense, National Security in the 21st Century, Report of the National Defense Panel, Dec 1997
2 Alvin and Heidi Toffler, War and Anti-War
3 Joint Pub 0-2, pg xv
4 Joint Pub 0-2, pg II-13